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ABSTRACT

This report describes the comparisons of three groups of 1976-77 kindergarten students in the Seattle, Washington public schools: (1) early entrants who were screened by the Student Services Office; (2) early entrants admitted by school principals; and (3) a random sample of non-early entrants. The groups were compared on the basis of teacher ratings on a set of scholastic, physical, and social development scales. Tables show the sex distribution of students within entry groups, correlations between rating scales and promotion status, and entry status means adjusted for sex differences. The major finding was that Student Services screened early entrants surpassed the other two groups, although the difference was statistically significant only for vocabulary and language/reading readiness skills. The report concludes with recommendations for improving the screening process and subsequent evaluation of entrants. (APM)

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EARLY KINDERGARTEN ENTRY EVALUATION, 1976-77

REPORT NO. 77-25
DECEMBER 1977

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Instructional Program Evaluation

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Management Information Services

SEATTLE
PUBLIC
SCHOOLS

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EARLY KINDERGARTEN ENTRY EVALUATION, 1976-77

REPORT NO. 77-25
DECEMBER 1977

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ABSTRACT

Early Kindergarten Entry Evaluation, 1976-77, Report No. 77-25, describes the comparison of three groups of 1976-77 kindergarten students: early entrants who were screened by the Student Services Office, principal-admitted early entrants, and a random sample of non-early entrants. The three groups were compared on the basis of teacher ratings on a set of scholastic, physical, and social development scales.

The major finding was that Student Services screened early entrants tend to surpass the other two groups although the difference reaches statistical significance for only two scales; vocabulary and language/reading readiness skills.

Three recommendations are offered for 1977-78 in order to overcome certain limitations of the investigation of the 1976-77 screening process.

1. Since it is not known how Student Services screened early entrants compare with other kindergarten students on certain demographic variables, it is recommended that information on sex, ethnic group, language background, relative English fluency, family income, and family structure (whether or not mother and father are both present in the home) be collected on all children involved in the study of early kindergarten entry.

2. Since little is known about the properties of the instruments used by Student Services to screen for early entry, it is recommended that an examination be conducted to answer three questions. First, how well do the instruments distinguish between early entrants and those screened but not selected for early entrance. Second, which instruments are most and least effective in distinguishing selected and non-selected children. Third, how well do the instruments predict scores on the assessment scales.

3. Since little is known about the validity of the assessment scales, it is recommended that scores on these rating scales be correlated with achievement test scores, at such time as an achievement test is administered to the children involved in the present study.

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INTRODUCTION

Background

The standard age requirement for entry into kindergarten in Seattle Public Schools is that a child be five years old on or before November 1 of the school year. For some years the District has had a policy of limited exemption to this requirement whereby a child who reached five years of age between November 1 and January 1 of a given school year may apply and be considered for early kindergarten entry.

Until the 1976-77 school year, early entry applications were received and processed at individual schools by principals and other staff. While some guidelines were provided for screening applicants, building staff members had considerable latitude in determining the scope and content of the screening process and the selection criteria.

Beginning in the Summer of 1976, a centrally administered screening process was implemented by the Office of Student Services in an effort to standardize entry criteria Districtwide. Since the process did not start at the beginning of the annual school registration cycle, some students were admitted to early kindergarten entry under the former building-level screening procedure. This situation presented an opportunity to compare first year performance of three groups of students entering kindergarten on the basis of three different sets of criteria:

1. Students meeting the standard age requirement
2. Students admitted early on the basis of screening by building staff
3. Students admitted early on the basis of screening by the Office of Student Services

The present study addresses this comparison.

Overview

The remaining sections of the report include a Purpose and Procedures section which describes methods used for data gathering and analysis, a Results and Discussion section which interprets the findings of the study, and a Recommendations section which offers some possible courses of action pursuant to needs identified in earlier sections.

PURPOSE AND PROCEDURES

Purpose of the Study

The purpose of this assessment was to compare kindergarten children who were screened by the Student Services Office for early entry into kindergarten with two other groups: non-early entrants and children who were admitted early by principals' decision. The screened early entrants were those children who had reached the age of five between November 1 and January 1 and, on the basis of interviews and testing by a Student Services coordinated team, were admitted to kindergarten. Non-early entrants were children admitted to kindergarten on a regular basis, having reached the age of five by November 1. Children admitted early by principals' decision had (in most cases) reached their fifth birthday between November 1 and December 31. These three groups were in kindergarten during the 1976-77 school year and were assessed by their classroom teachers on a set of scholastic, physical, and social development scales in the Spring of 1977. These scales were the major dependent variables used in comparing the three groups.

Assessment Design

Population. Five hundred eighteen children were involved in the study: fifty-seven Student Services screened early entrants, forty-eight principal-admitted early entrants, and four hundred thirteen non-early entrants. The non-early entrant group consisted of twenty-five percent of all non-early entrants in classes attended by screened early entrants. For this group a random interval sample was drawn from class lists rank ordered on students' birthdate. This technique assured that the entire age range of non-early entrants was represented in the sample. Two hundred seven boys and two hundred seventy girls made up the study population.

Assessment Scales. Each child in the study was rated by her/his teacher on fourteen scales designed to assess scholastic, physical, and social development. In addition, the child's teacher indicated whether or not promotion to the first grade was intended. The rating form used is included as the appendix to this report. Each rating scale had five response categories: low, low average, average, high average, or exceptional. For purposes of analysis the categories were scored low = one, low average=two, average = three, high average = four, and exceptional = five.

Analyses. Three types of analyses were performed.

(1) The sex composition of the three groups was compared.

(2) The intercorrelations of the rating scales were calculated. The correlation matrix also included the variables of age and whether or not the child would be promoted to the first grade.

(3) The joint effects of sex and entry status (screened early entrant, principal-admitted early entrant, and non-early entrant) on the assessment scale ratings were investigated by a series of two-way (sex by status) analyses of variance. One scale, absenteeism, was omitted from analysis because of scoring inconsistencies.

RESULTS AND DISCUSSION

Sex Distribution

Table 1 gives the sex composition of the three groups. The unenclosed numbers are raw frequencies and the numbers in parentheses are the corresponding percentages within groups. A statistical test indicates that the ratio of males to females differs significantly ($p < .05$) among the three groups. In the screened early entrant group, females outnumber males two to one while the non-early entrant ratio is approximately one to one. In the principal-admitted early entrant group, the ratio of males to females is 1.4 to 1.0. Thus there was a clear tendency for the screening process to result in the selection of a higher proportion of female than male early entrants and a similar but less pronounced tendency in the case of principal-admitted early entrants.

TABLE 1

SEX REPRESENTATION OF KINDERGARTEN STUDENTS WITHIN GROUPS
(SPRING 1977)

Group	Male	Female	Total
Screened Early Entrants	19 (33.3)	38 (66.7)	57 (100.0)
Principal-Admitted Early Entrants	20 (41.7)	28 (58.3)	48 (100.0)
Non-Early Entrants	205 (49.6)	208 (50.4)	415 (100.0)

Relationships Between Rating Scales

The intercorrelations among the rating scales ranged from a low of .29 (cooperativeness with physical health) to a high of .91 (attention span with listening skills). A correlation of 1.0 is the highest possible. The correlations of the rating scales with age were not significantly different from zero, indicating essentially no relationship. Perhaps the most interesting correlations are those between the rating scales and whether or not a child would be promoted. The obtained correlation was divided by the maximum correlation possible given that only four percent would not be promoted. These correlations are given in Table 2. Predictably, the highest correlation between promotion status and any rating scale is that for readiness for first grade. The lowest correlation is that for physical health.

TABLE 2

CORRELATIONS BETWEEN RATING SCALES AND
PROMOTION STATUS
(Spring 1977)

Scale	Correlation with Promotion Status
Large muscle coordination	.67
Fine muscle coordination	.73
Interpersonal relationships (social skills)	.68
Attention span	.61
Listening skills	.60
Follows directions	.73
Cooperativeness	.55
Vocabulary (oral)	.48
Math skills and concepts	.71
Language and reading readiness skills	.70
Independent work skills	.73
Physical health (stamina)	.34
General readiness for first grade	.91

Rating Scale Differences Among Entry Status Groups

Table 3 gives the rating scale means for the three entry status groups adjusted for differences attributable to sex. The differences among means that proved statistically significant ($p < .05$) are those marked with an asterisk. Significant differences were found for two scales: vocabulary and language/reading readiness skills. On these two scales, the Student Services screened early entrants' rating exceeded that for principal-admitted early entrants, which in turn exceeded that for non-early entrants. Although statistical significance was not reached for the remaining scales, there does appear to be a trend for screened early entrants to surpass the other two groups when all scales are considered together. This trend is reflected in the overall mean rating in the last row of Table 3 which shows the mean rating for Student Services screened early entrants highest, non-early entrant mean next, and principal-admitted early entrant mean lowest.

There is also a significant mean difference between sexes on all but three scales, vocabulary, math skills and concepts, and physical health. For all those scales with a significant sex difference the girls' rating exceeds that for boys.

TABLE 3

ENTRY STATUS MEANS* ADJUSTED FOR SEX DIFFERENCES (Spring 1977)

Scale	Entry Status: Student Services Screened	Principal Admitted	Non-Early Entrant	Total
Large muscle coordination	3.04	2.97	3.20	3.16
Fine muscle coordination	3.23	2.90	3.14	3.13
Interpersonal relationships (social skills)	3.09	3.07	3.14	3.13
Attention span	3.30	3.01	3.09	3.11
Listening skills	3.39	3.08	3.09	3.12
Follows directions	3.33	3.12	3.17	3.18
Cooperativeness	3.48	3.37	3.42	3.42
Vocabulary (oral)	3.51	3.24	3.19	3.23*
Math skills and concepts	3.41	3.26	3.18	3.21
Language and reading readiness skills	3.65	3.31	3.19	3.25*
Independent work skills	3.39	3.15	3.27	3.26
Physical health (stamina)	3.32	3.34	3.29	3.30
General readiness for first grade	3.48	3.20	3.17	3.21
Mean, all scales	3.36	3.13	3.18	3.20

* Numbers in the table are averages over ratings of one through five (low = one, low average = two, average = three, high average = four, and exceptional = five).

RECOMMENDATIONS

Evidence presented in this study generally supports continuation of the early kindergarten entry program. However, the study was limited in several respects which suggest recommendations for a more thorough examination of the screening process.

Demographic Characteristics

First, information was not obtained regarding certain demographic characteristics of the three groups. It would be of interest to see if the three groups differ with respect to ethnic composition, language background and relative English fluency, family income, and family structure (whether or not mother and father are both present in the home). Moreover, it would be of interest to compare early entrants accepted after screening with children screened but not accepted with respect to the same demographic descriptors.

Recommendation 1:

It is recommended that in 1977-78 demographic (sex, ethnic group, language background, relative English fluency, family income, and family structure) information be collected on all children involved in the study of early kindergarten entry.

Screening Instruments

Due to a strike against the District, many of the personnel assigned to conduct the screening process were not available. The process was considerably modified by the Student Services Office to accommodate this situation. A second limitation of the study resulted from the lack of consistency in the administration of a common set of screening instruments to all early entrant applicants. It was not possible to determine how well the screening instruments distinguish between children selected for early entrance and children who were not selected, which instruments contribute most and least to discrimination, and how well the screening instruments predict scores on the assessment scales. (The screening process for 1977-78 applicants will include a standard set of instruments administered in all cases.)

Recommendation 2:

It is recommended that in 1977-78 the screening instruments be examined for how well they distinguish between early entrants and those screened but not selected for early entrance, which instruments contribute most and least to discrimination, and how well the instruments predict scores on the assessment scales.

Assessment Scales

A third limitation of the present study is the lack of knowledge of the validity of the assessment scales. Do they adequately assess the areas relevant to school success? An approach that might be taken to address this question would be to examine the correlations between the scales and a measure of scholastic achievement.

Recommendation 3:

It is recommended that, as soon as an achievement test is administered to students of the present study, achievement test results be correlated with scores on the assessment scales to provide a measure of the validity of the scales.

APPENDIX

SEATTLE PUBLIC SCHOOLS
Kindergarten Survey

Date_____

STUDENT'S NAME_____

For the above named student, please indicate by a check in the spaces provided whether this student is, in your judgment, low, low average, average, high average, or exceptional when compared with the mean of your class:

	Low	Low Average	Average	High Average	Except.
1. Large muscle coordination					
2. Fine muscle coordination					
3. Interpersonal relationships (social skills)					
4. Attention Span					
5. Listening skills					
6. Follows directions					
7. Cooperativeness					
8. Vocabulary (oral)					
9. Math skills and concepts					
10. Language and reading readiness skills					
11. Independent work skills					
12. Physical health (stamina)					
13. Absenteeism					
14. General readiness for 1st grade					

Are you currently planning to promote this child to first grade? Yes_____ No_____

Comments:

Teacher:_____ School_____

RETURN TO: STUDENT SERVICES OFFICE
ROOM 226
A & S CENTER

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